

PATENT COOPERATION TREATY

From the:
INTERNATIONAL SEARCHING AUTHORITY

PTO 13 FEB 2006

REC'D 01 NOV 2004

VIA PCT

To:

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2 Chifley Square
Sydney NSW 2000

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)	13 OCT 2004
Applicant's or agent's file reference 205392404		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/AU2004/001095	International filing date (day/month/year) 13 August 2004	Priority date (day/month/year) 13 August 2003	
International Patent Classification (IPC) or both national classification and IPC Int. Cl. 7 A01G 9/02, 27/00; B65D 21/00			
Applicant KEATS, John Rodney			

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer A. SEN Telephone No. (02) 6283 2158
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/AU2004/001095

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - in written format
 - in computer readable form
 - c. time of filing/furnishing
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/AU2004/001095

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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1. Statement

Novelty (N)	Claims 11, 12, 15, 16, 21, 26-41, 43-49	YES
	Claims 1-10, 13, 14, 17-20, 22-25, 42, 50, 51	NO
Inventive step (IS)	Claims	YES
	Claims 1-51	NO
Industrial applicability (IA)	Claims 1-51	YES
	Claims	NO

2. Citations and explanations:

NOVELTY (N): Claims 1-10, 13, 14, 17-20, 22-25, 42, 50, 51

(a) DE 2704414: Claims 1, 2, 7, 9, 13, 14, 17-20, 22, 42, 50, 51

From description and figures, pot 1 stacked in use by connecting with columns 2 is shown in figure 1; separation means 6; overflow outlet 8; overflow chamber 3 closed off by cap 10; drainage outlet from overflow chamber 12

(b) FR 2715269: Claims 1, 2, 9, 19, 23-25, 42, 50, 51

Pot 1 stacked in use is shown in figure 3; separation means 11 and 6; overflow outlet 10; soil holding region 7 above separation means 6; wick 9

(c) GB 2369980: Claims 1-6, 8-10, 13, 14, 16, 17, 19, 23-25, 42, 50, 51

Pot 110 stacked in use by connecting means 132 is shown in figure 3; separation means 24; dam 22; overflow outlet 18; overflow chamber is on the side of dam 22 opposite to reservoir 26

Hence each citation discloses all the features of each claim listed alongside.

INVENTIVE STEP (IS): Claims 1-51

Claims 1-10, 13, 14, 17-20, 22-25, 42, 50, 51: as above

(d) US 3452475: stacked in use as per figure 1 and also column 2, line 25; water reservoir region 38; soil holding region 36; separation means 29; overflow outlet 45; dam wall 31

Claims 1-9, 19, 20, 22, 37-43, 45, 47, 50, 51, each lack an inventive step with respect to this citation. This citation discloses a soil holding region to the *side* of the water reservoir region instead of *above* the reservoir region as per your claims. Your claims therefore define an invention that is merely a variation of the invention disclosed in the citation and can be arrived at by the person skilled in the art (PSA) by general experimentation alone without applying ingenuity.

Continued in Supplemental Box

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International Application No.

PCT/AU2004/001095

Supplemental Box

In case the space in any of the preceding boxes is not sufficient,

Continuation of: Box V

(e) US 2001/0052199: stacked in use as per figures 9-11; water reservoir region 34; soil holding region 21 above reservoir region 34; separation means 36; drain 27

Claims 1, 2, 9, 20, 22, 42, 50, 51, each lack an inventive step with respect to this citation. This citation discloses a drain that is a manually operated version of the 'automatic' overflow as per your claims. This drain can be used to manually feed water to the next pot down as per column 2, end of paragraph 0018. Your claims therefore define an invention that is merely a variation of the invention disclosed in the citation and can be arrived at by the person skilled in the art (PSA) by general experimentation alone without applying ingenuity.

(f) WO 1998/056233: lobe sections 11, bridge sections 13 etc

(g) US 4102081: separation means 22 with openings 26

(h) DE 3618833: dam walls 23-26

(i) EP 0142471: saucer 2

Claims 1, 2, 7, 9, 18-22, 26-30, 37-43, 45-51, each lack an inventive step with respect to WO 1998/056233 when combined with US 4102081; Claims 23-25 each lack an inventive step with respect to WO 1998/056233, US 4102081 and FR 2715269 combined; Claims 3-6, 8, 10-17, each lack an inventive step with respect to WO 1998/056233, US 4102081 and DE 3618833 combined; Claims 31-36, 44, each lack an inventive step with respect to WO 1998/056233, US 4102081 and EP 142471 combined.

In addition to the above, Claims 21, 26-30, 37, each lack an inventive step with respect to DE 2704414; Claims 18, 20, 21, 22, 26-30, each lack an inventive step with respect to FR 2715269 and GB 2369980 respectively. Each claim defines an invention that is merely a variation of the invention disclosed in each citation and can be arrived at by the person skilled in the art (PSA) by general experimentation alone without applying ingenuity.

WRITTEN OPINION OF THE
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International application No.

PCT/AU2004/001095

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claim 2 is not clear in that I cannot make out the meaning of 'laterally defined'. You probably meant that the 'perimeter wall of the reservoir region is defined, at least partially, by the side wall of the plant pot'. I have a similar objection to Claims 3, 6 and 15.

Rec'd PTO 13 FEB 2006

1

STACKABLE PLANT POT

Technical Field

The present invention relates to stackable plant pots and, in particular, to easily waterable stackable plant pots.

5

Background

- Various forms of plant pots are known for growing plants. Typical plant pots are either of generally cylindrical, frustoconical or rectangular prism form. Frustoconical type plant pots, or other plant pots which are tapered so that the bottom of each pot is
- 10 narrower than the top, are advantageous over cylindrical or rectangular prism type pots in that they are often able to be located at least partially within each other and thereby able to be stacked for transport, storage and display, thereby realising considerable space savings. Generally, however, such plant pots can not be stacked - one on top of another - in any suitable manner for use. Many pot plant enthusiasts like to arrange
- 15 several pots in a generally vertical relationship for particular aesthetic appeal and saving of space. Such an arrangement currently typically depends on use of a separate stand to mount the pots or the hanging of one pot from another with chains or the like.
- Several attempts have been made to provide stackable plant pots. One such attempt is disclosed in Australian patent no. 634522 in the name of Gromax Systems, Inc. This
- 20 patent discloses a multiplicity of plant pots having an essentially square-shaped cross section. The plant pots can be stacked on top of one another by having each plant pot rotated approximately 45 degrees about a common axis relative to an adjacent plant pot. The adjacent plant pots are seated one on top of the other, consequently requiring that the individual plant pots (particularly those located towards the bottom) are particularly
- 25 strong and rigid. This arrangement provides only a very small useable area for growing plants, namely, the small corner portions which protrude beyond the pot immediately above. Also, this arrangement of plant pots is not adapted to be hung or suspended.
- Australian patent no. 586493, in the name of Steven Fraknoi, also discloses an arrangement of stacked plant pots. Each pot is adapted to be seated upon a pot located
- 30 immediately beneath it. In order to support the weight of a series of stacked pots, each individual pot must be particularly strong so that pots near the base of the arrangement are not squashed or deformed. Also, the particular design and construction of each individual pot is quite complex and it would be difficult and expensive to manufacture. This particular arrangement of plant pots is also not adapted to be hung or suspended.

European patent no. 0 142 471, in the name of Werner Gerber, discloses a plant pot adapted to be stacked one on top of another. The plant pot of this disclosure is relatively flimsy and the stacking of 3 or more plant pots (especially if they contain soil) is likely to cause the lower pots in the arrangement to collapse or deform. The pots of this

5 disclosure have connecting means comprising protruding tabs extending from an upper rim of each pot for insertion in a corresponding slot in a base of an adjoining pot. This arrangement for connecting adjacent pots is awkward for a user, given the relatively small sizes of the corresponding protrusions and slots. The arrangement also provides no added strength to the arrangement of pots.

10 International patent application no. PCT/AU98/00432 discloses a plant pot which, in use, is adapted to be stacked with one or more other similar plant pots. The relevant plant pot includes an upper rim made up of lobe rims and bridge rims, a base portion and a surrounding wall extending between the upper rim and the base portion, shaped so as to define a plurality of radially extending lobe sections. The base portion includes a recess 15 (eg channel) formed in an underside of each lobe section. The upper rim and the recesses (eg channels) are configured in such a way that, when 2 or more plant pots are stacked, the rim and the recesses of adjoining plant pots inter-engage to hold the plant pots firmly in place. In the particular arrangement described, the recesses in the base portion are adapted to overlie portions of the upper rim thereby holding adjoining plant 20 pots in position and, at the same time, providing a substantial degree of structural rigidity of the stack of plant pots.

The stack of pots disclosed in PCT/AU98/00432 is structurally very strong owing to the configuration of the rim and the recesses and to the manner in which these inter-engage. The lobe sections of adjoining plant pots are off-set so that a lobe section of one plant 25 pot does not obstruct a lobe section of a plant pot immediately beneath it.

One of the deficiencies in the prior art devices discussed above relates to the watering of plants within a stack of plant pots. Presently, watering is effected in a number of different ways. For instance, each plant pot in the stack may be separately watered by pouring water into each plant pot in the stack. Alternatively, the plant pots may have one or more 30 holes located in lower portions thereof so that water can pass from an upper pot to a lower pot. However, a problem with this arrangement is that water in the upper pots is not retained and the water eventually flows down to all of the lower plant pots leaving the upper plant pots with insufficient retained water. Consequently, the lower plant pots typically end up having too much water whereas the upper pots tend to have too little 35 water.

Accordingly, this invention is directed towards a stackable plant pot which is adapted to form a stack of plant pots which, following watering, are adapted to retain a desired amount of water in each plant pot within the stack.

5 Summary of Invention

According to a first aspect of this invention, there is provided a plant pot which, in use, is adapted to be stacked with one or more similar plant pots, said plant pot comprising:

- a cavity including a water reservoir region and a soil holding region located above said reservoir region;
 - separation means adapted to separate the water reservoir region from the soil holding region; and
 - an overflow outlet in the reservoir region adapted to enable excess water to flow out of said reservoir region.
- 15 Preferably, the above plant pot includes drainage means enabling water to drain from the soil holding region into the water reservoir region.

In a preferred embodiment, the separation means is a separation plate. In this embodiment, the drainage means may include one or more perforations in the separation plate. Alternatively, the drainage means may include a drainage gap between the separation plate and a side wall of the plant pot. It is further preferred that the one or more perforations and/or drainage gaps are adapted so as to inhibit soil from passing into the water reservoir region.

It is further preferred that the plant pot includes soil watering means adapted to transfer water from the water reservoir region to the soil holding region. The soil watering means typically comprises an absorbent wick which extends between the water reservoir region and the soil holding region. In this embodiment, the absorbent wick may pass through an aperture in the separation means or through a gap between the separation means and the side wall of the plant pot.

The water reservoir region may be laterally defined by a side wall of the plant pot, such as a side wall which extends entirely about the plant pot. Alternatively, the water reservoir region may be laterally defined by a dam wall (eg an inner surface of the dam wall) extending upwardly from a base of the plant pot. This dam wall may substantially follow the contour of the surrounding wall of the plant pot. However, the contour of the

dam wall can be of any other suitable shape, such as circular, rectangular, square, oval, triangular or any other such shape. Alternatively, the water reservoir region may be laterally defined by a combination of both:

- (a) the sidewall of the plant pot; and
- 5 (b) one or more dam walls.

The water reservoir region may also comprise a number of separate water pools within the plant pot.

In an embodiment in which the water reservoir region is laterally defined (either completely or partially) by a surrounding wall of the plant pot, the overflow outlet may

10 include one or more holes in the surrounding wall. Where the water reservoir region is laterally defined (either completely or partially) by a dam wall, the overflow outlet may include one or more holes in an upper portion of the dam wall. Obviously, these holes (in either the surrounding wall or the dam wall) will be positioned at a height at or slightly above the desired water level of the water reservoir region.

15 Alternatively, the overflow outlet may comprise a gap between an upper rim of the dam wall and the separation plate. The separation plate may be seated upon the upper rim of the dam wall, in which case the abovementioned gap may comprise one or more grooves, bites, cut-outs or slots in the upper rim of the dam wall.

The plant pot may further include an overflow chamber laterally defined by an outer 20 surface of the dam wall and the surrounding wall (or a portion of the surrounding wall) of the plant pot. This overflow chamber is adapted to receive water which flows over or through the dam wall from the water reservoir region. The water overflow chamber typically (but not necessarily) extends fully around the dam wall. Alternatively, the overflow chamber may comprise one or more sub-chambers located at various points 25 around the base of the plant pot.

In a particularly preferred embodiment, each plant pot includes a plurality of radially extending lobe sections and bridge sections, said bridge sections interconnecting the lobe sections. In a particularly preferred embodiment, the plant pot includes three lobe sections and three bridge sections. Each lobe section preferably defines a sub-cavity of 30 the cavity of the plant pot. Each sub-cavity is preferably in open communication with a central cavity region.

In a particularly preferred embodiment, each plant pot comprises a plurality of lobe sections and interconnecting bridge sections, wherein each lobe section includes a base portion in an underside of which is located a recess and each bridge section includes a

bridge rim adapted to be received within the recess of a lobe section of an upper adjacent plant pot. In this embodiment, a plurality of the plant pots of this invention are adapted to be stacked so that, in use, the lobe sections of adjoining plant pots are offset. In this way, the lobe sections of a plant pot do not obstruct the lobe sections of a lower adjacent plant pot.

5

Brief Description of the Drawings

In order that the present invention may be more clearly understood, preferred forms will be described with reference to the following figures.

10 Figure 1 is a side cross-sectional view of a stack of plant pots according to a preferred embodiment of this invention.

Figure 2 is a side cross-sectional view of a single plant pot according to a preferred embodiment of this invention (but not showing the separation plate).

15 Figure 3 is a cross-sectional view of the dam wall of the plant pot according to a preferred embodiment of this invention.

Figure 4 is a top view of the plant pot of Figure 2.

Figure 5 is a bottom view of the plant pot of Figure 2.

Figure 6 is a top perspective view of the plant pot of Figure 2.

Figure 7 is a bottom perspective view of the plant pot of Figure 2.

20 Figure 8 is a side view of the stack of plant pots of Figure 1.

Figure 9 is a top view of a plant pot according to an alternative embodiment of the invention.

Figure 10 is a side view of the plant pot of Figure 9.

25 Figure 11 is a top perspective view of a stack of plant pots according to alternative embodiment of the invention.

Figure 12A is a side view of a storage mode stack of plant according to a preferred embodiment of this invention.

Figure 12B is a side, partially cross-sectional view of the storage mode stack of plant pots of Figure 12A.

30 Figure 13A is a top view of a separation plate of a plant pot according to a preferred embodiment of this invention.

Figure 13B is a bottom view of the separation plate of Figure 10A.

Figure 13C is a top perspective view of the separation plate of Figure 13A.

Figure 13D is a bottom perspective view of the separation plate of figure 13A.

Figure 14A is a side cross-sectional view of a saucer for use with a plant pot, or a stack

5 of plant pots, according to a preferred embodiment of this invention.

Figure 14B is a top view of the saucer of Figure 14A.

Figure 15 is a partial cross-sectional view of a section of the saucer of Figure 14A showing an engagement stub for engaging the saucer with an adjoining plant pot.

Figure 16 is a side cross-sectional view of stack of two of the saucers depicted in figure

10 14A.

Description of Preferred Embodiments

As shown in the diagrams, particularly Figures 1 and 2, a preferred embodiment of the present invention includes a plant plot 1 having an upper lip 2, a base 3 and a surrounding sidewall 4 which extends between the lip 2 and the base 3. The plant pot includes a cavity 5 laterally defined by the sidewall 4. The cavity 5 includes a soil holding region 6 and water reservoir region 7.

The soil holding region 6 and the water reservoir region 7 are separated by a separation plate 10. In the embodiment shown in the drawings, the plant pot also includes a dam wall 20. This dam wall 20 extends upwardly from the base 3 or, preferably, from a recess 15 within the base 3.

25 The base 3 may have a centrally located aperture 16. This aperture 16 is adapted to have a cord, rope, chain or other similar extension pass therethrough. Such a cord, rope, chain and the like may, thereby, pass through a stack of plant pots 1 and be affixed to an overhanging support from which the stack may be suspended.

The base 3 also preferably includes a centrally located indent section 17 which is located about the aperture 16 and which extends from the aperture to a lower portion of the base 3. This indent section 17 provides greater structural rigidity to the plant pot 1.

30 Located between the separation plate 10 and the dam well 20 are one or more gaps 8 adapted to enable overflow water to escape from the water reservoir region into an outer overflow sub-chamber 29.

As also shown in Figure 1, a saucer plate 50 may be located underneath a plant pot 1, or underneath the lowermost plant pot 1 of a stack of plant pots. Typically, the plant pot 1 and the saucer plate 50 will have engagement means so that when the stack of plant pots is suspended, the saucer plate is connected to the lower most plant pot and, 5 thereby, suspended with it. In the embodiment shown in Figure 1, the saucer plate includes a L-shaped tab 51 extending upwardly from the saucer base 52. This L-shaped tab 51 is adapted to inter-engage with a corresponding hole or shoulder 19 located on the recess 15 of the base 3. This is more particularly shown in Figure 3.

As shown in Figures 4 and 5, the plant pot 1 includes 3 lobe sections 30 and 3 10 interconnecting bridge sections 40.

Dam walls 20 are located within lobe sections 30. A central cavity region 25 is bounded by dam walls 20 and portions of the surrounding side wall which underlie the bridge sections 40.

Each of the lobe sections 30 includes a sub-cavity 27 which is the region in which a plant 15 is preferably grown.

On the external side of each dam wall 20 is located an overflow sub-chamber 29. Each 20 overflow sub-chamber 29 has holes or gaps located therein. The holes or gaps are typically located in a bottom region of the sub-chambers. Figure 7 shows a hole in the form of a slit 55 in one of the sub-chambers 29. These holes or gaps enable water to escape from the plant pot and drip into a lower plant pot in the stack.

The slit 55 may be positioned so that the water flows from it down into the adjoining lower plant pot. Alternatively, it may be positioned so that the water flows down into a lower plant pot but missing the adjoining lower plant pot.

The lobed sections and the bridge sections may be curved as shown particularly in 25 Figures 4, 5, 6 and 7. Alternatively, the lobe sections and bridge sections may be angular (of any desired orientation) as exemplified in Figures 9 and 11.

The plant pots of the present invention are configured so that, in use, they may be stacked, one upon another, as shown in Figures 1, 8 and 11. They are also, preferably, configured so that, in storage mode, a plant pot can be seated within an adjoining plant 30 pot, in stack formation as shown in figures 12A and 12B.

Figures 13A to 13D show a separation plate 10 adapted to be seated within the plant pot 1. The separation plate 10 is shaped as to conform with the internal shape of the plant pot 1 and has curved sides 61 which, in use, abut internal portions of the side wall beneath the bridge sections 40 of the plant pot 1. The separation plate 10 also has

curved end section 62 which, in use, abut portions of the curved side wall beneath the lobe sections 30 of the plant pot 1.

The separation plate 10 also has a plurality of drainage holes 63, 64 through which water drains from the soil holding region of the plant pot 1 to the water reservoir region. There 5 is also a gap 65 located in the curved end section 62. This gap 65 is the gap through which the absorbent wick (not shown) passes, thereby transferring water from the water reservoir region to the soil holding region.

There is also a central hole 67 located in the separation plate 10. This central hole 67 is adapted to be in alignment with the aperture 16 of plant pot 1. This central hole 67 and 10 the aperture 16 are adapted to enable a cord, chain, rope or other similar item to pass therethrough. This cord, chain, rope etc is adapted to be affixed to fixing means 58 located in the saucer plate 50.

Accordingly, in a preferred arrangement, there is a stack of plant pots 1, each of which contains a separation plate 10 which are stacked in offset orientation (as shown in 15 Figures 1 and 8). The lower-most plant pot 1 is connected to a saucer plate 50 by virtue of the inter-engagement of the L-shaped tab 51 of the saucer plate 50 and the corresponding hole or shoulder 19 in the recess 15 of plant pot 1. A cord, chain, rope or the like is affixed to the saucer plate 50 and passes up through the centre of the stack, through the central holes 67 and the apertures 16. The upper end of the cord, chain, 20 rope and the like can be tied or otherwise affixed to a support structure, such as a ceiling, pole, post or other similar item.

Typically, the abovementioned stack of plant pots can be watered by simply applying a water supply (e.g. from a hose or watering can) to the upper-most pot. Water is retained in the water-reservoir region of the pot and then additional (overflow) water reservoir 25 region of each pot is full of water.

The above described stack of plant pots may incorporate self-watering means, such as a watering hose (or tube) which passes up through the internal central apertures of the pots.

The word "comprising" and forms of the word "comprising" as used in the above 30 description of the invention do not limit the invention to exclude any variants or additions. Modifications and improvements to the invention will be readily apparent to those skilled in the art. Such modifications and improvements are intended to be within the scope of this invention.

Fig. 1

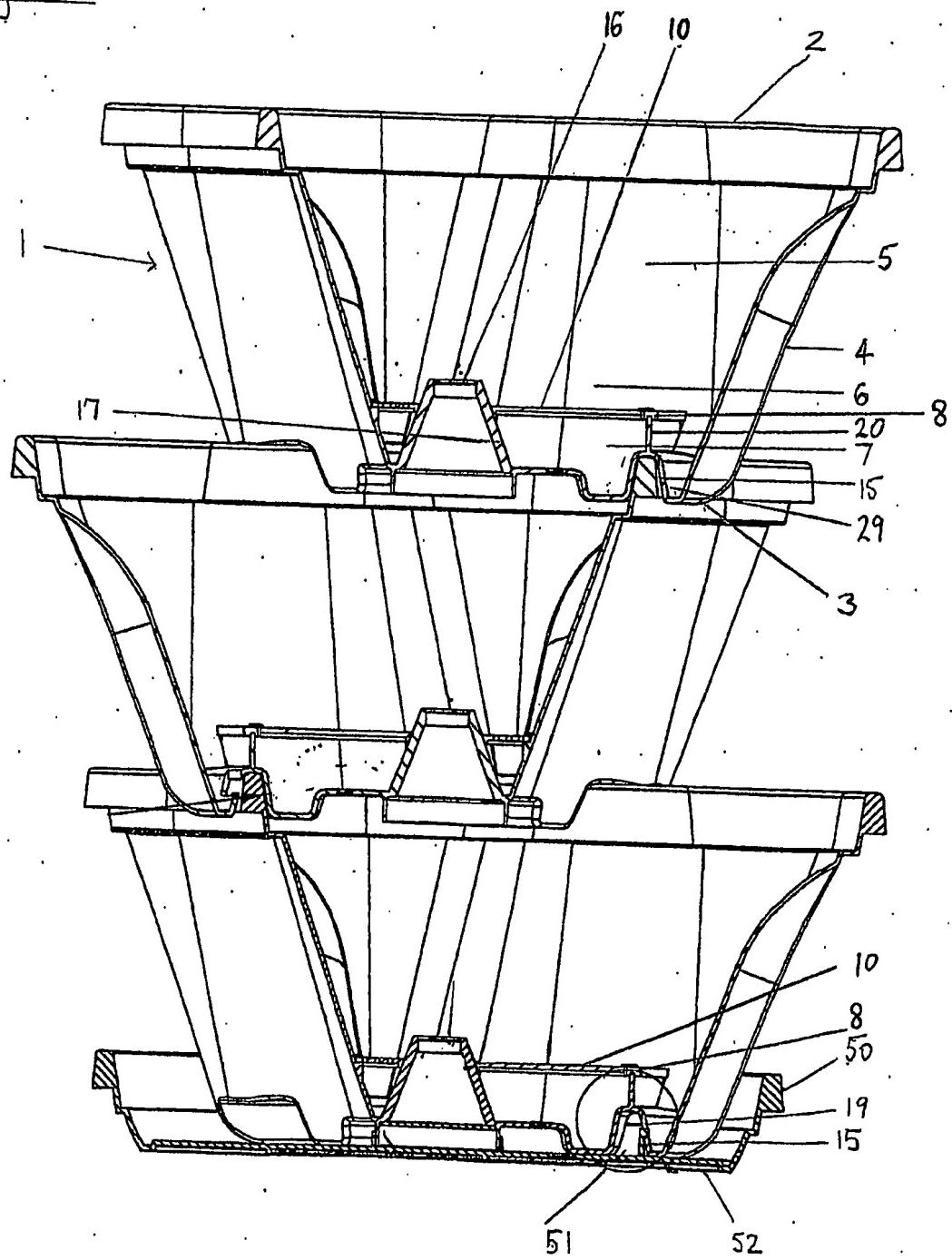


Fig. 2

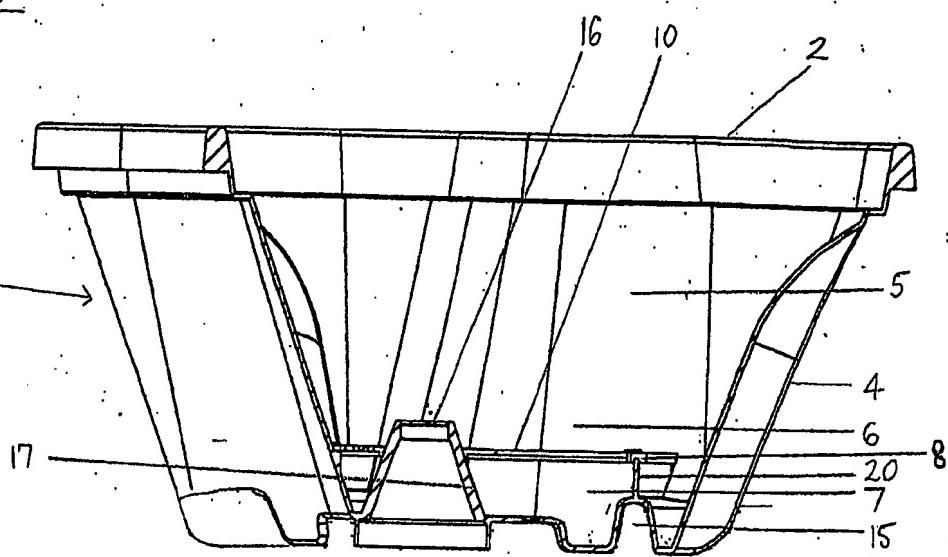


Fig. 3

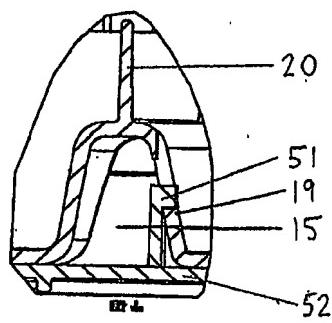


Fig. 4

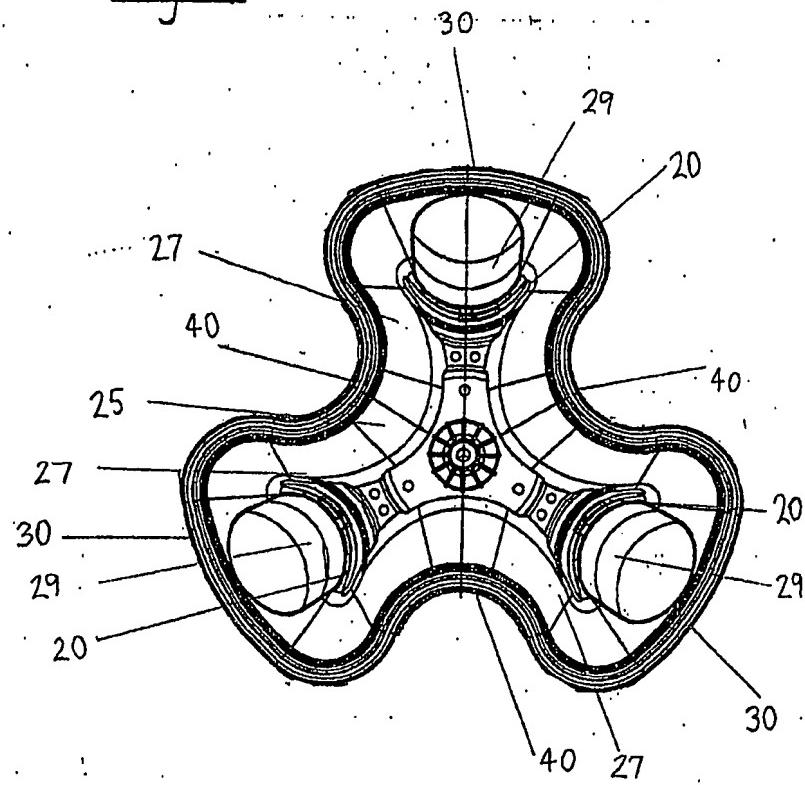


Fig. 5.

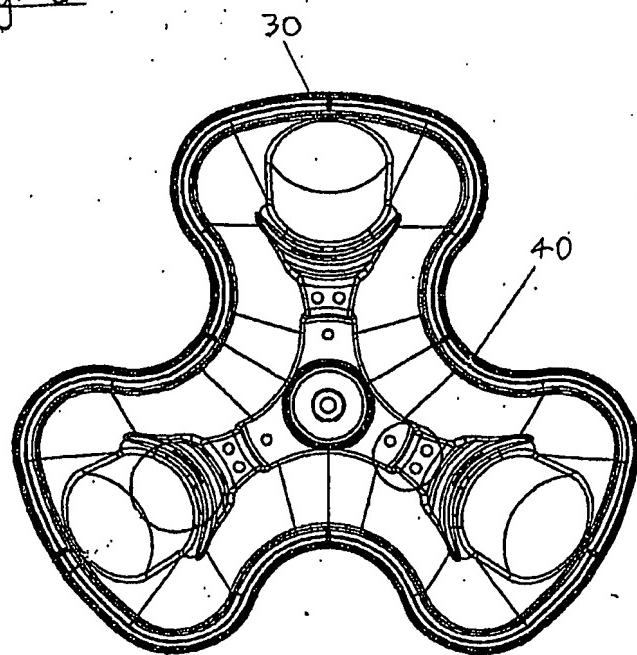


Fig. 6

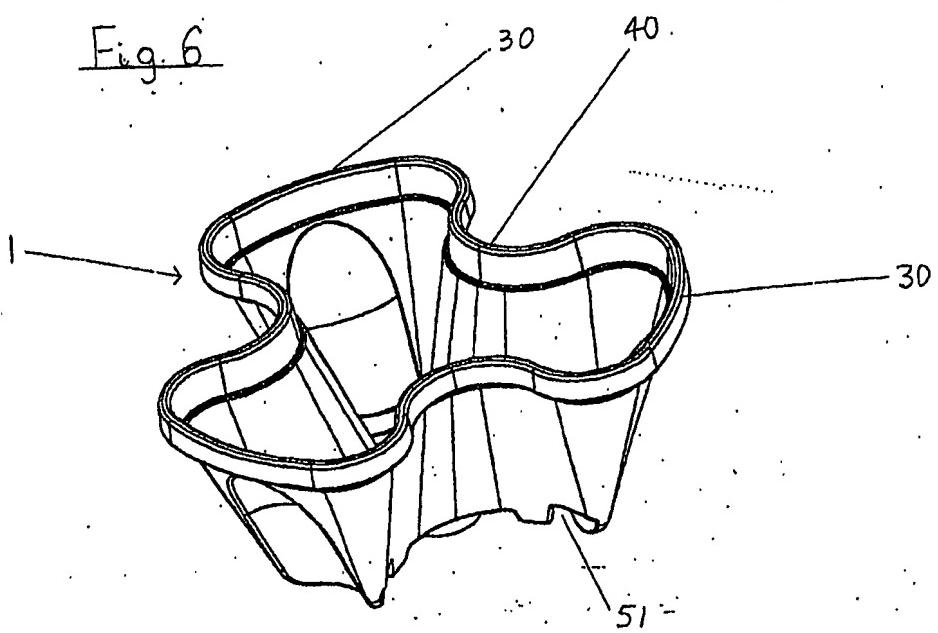


Fig. 7

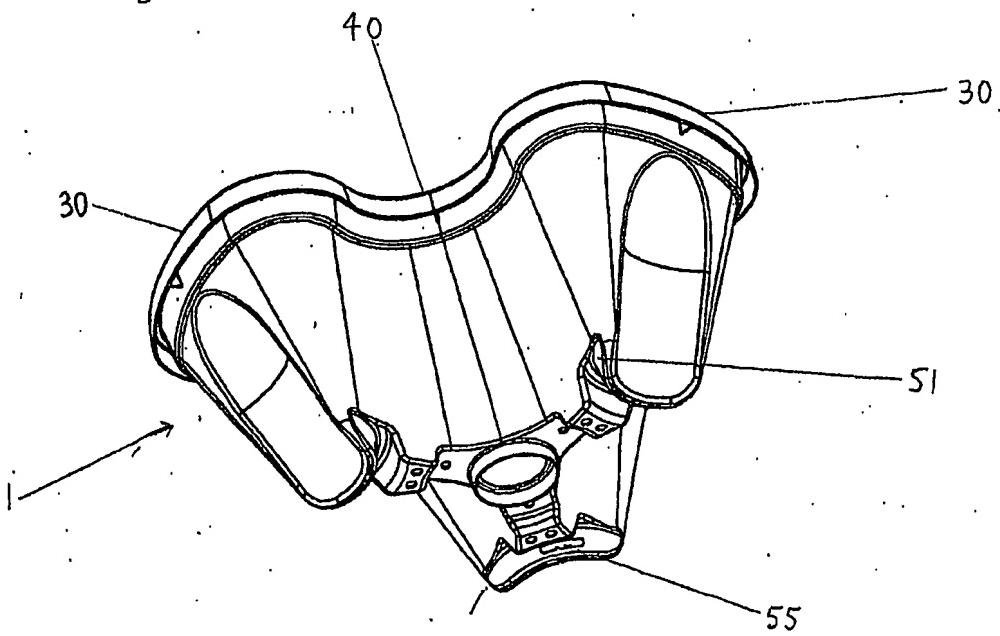


Fig. 8

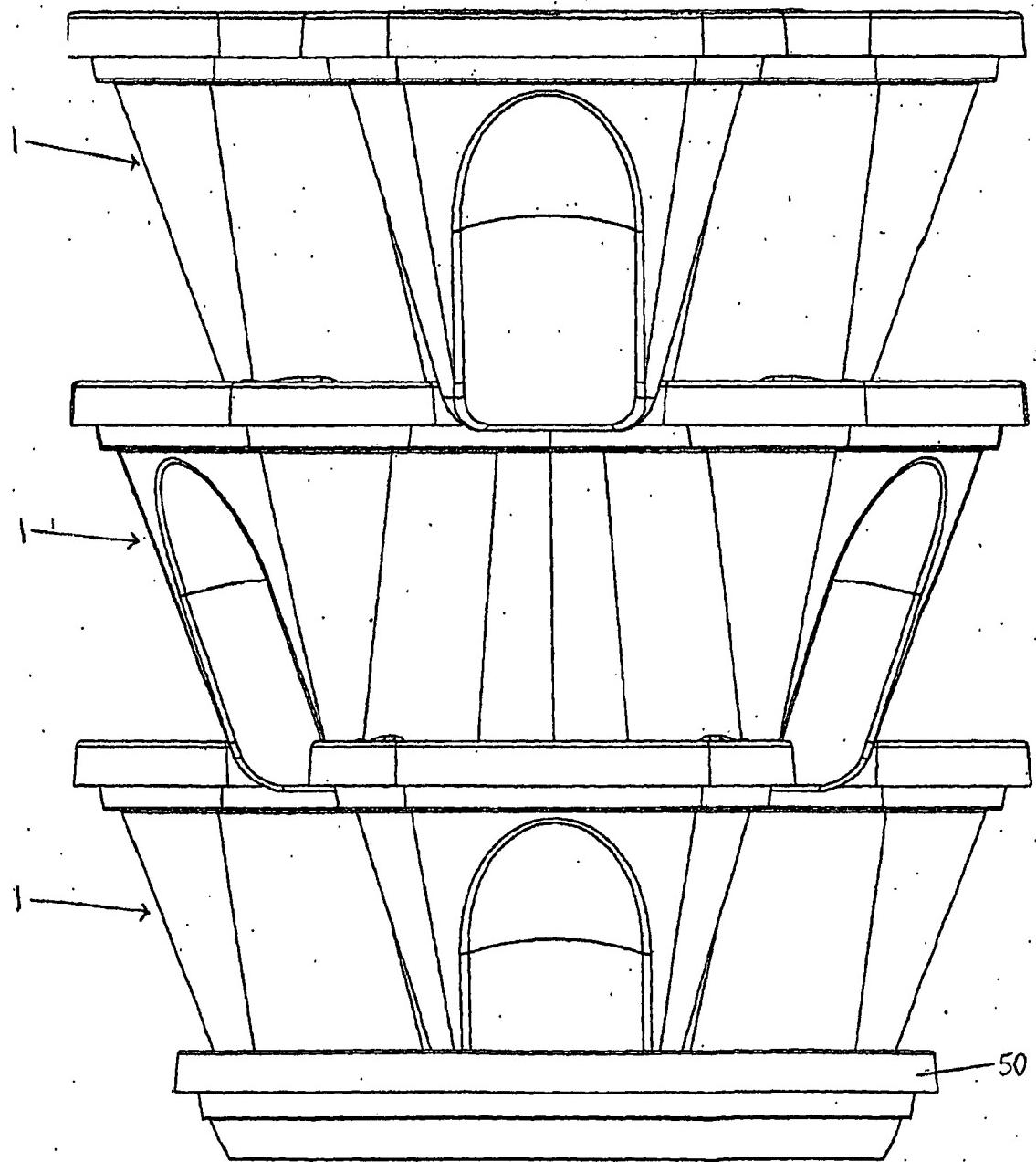


Fig 9

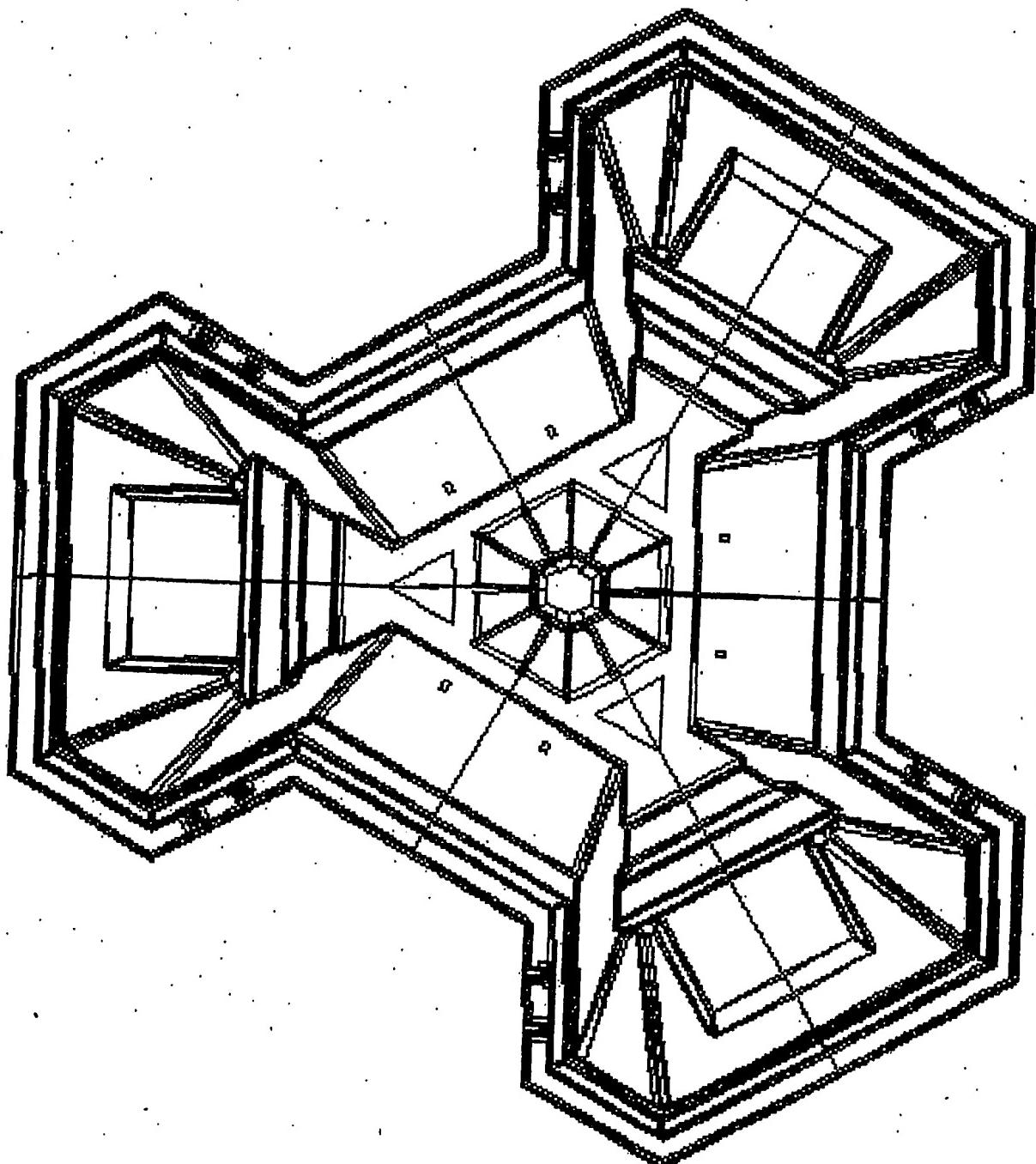


Fig. 10

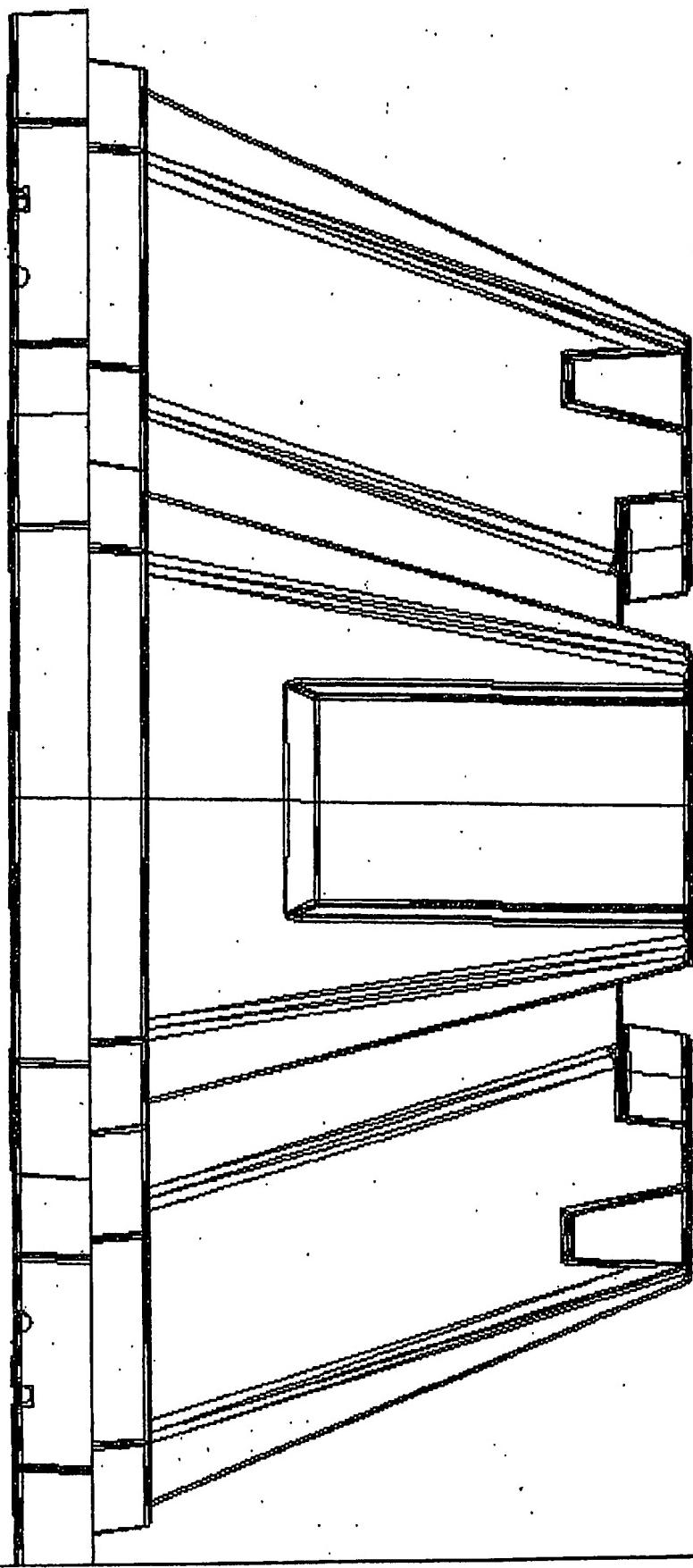


Fig. 11

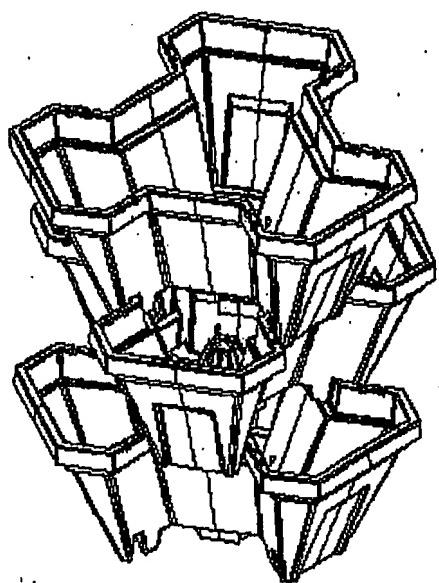


Fig. 12A

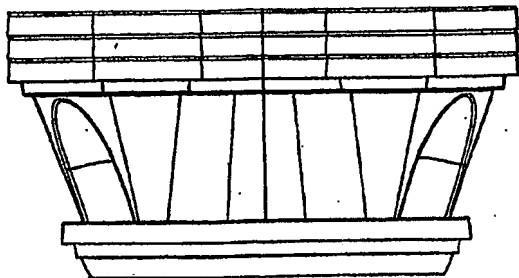


Fig. 12B

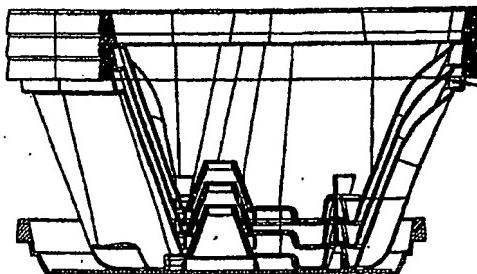


Fig 13.A

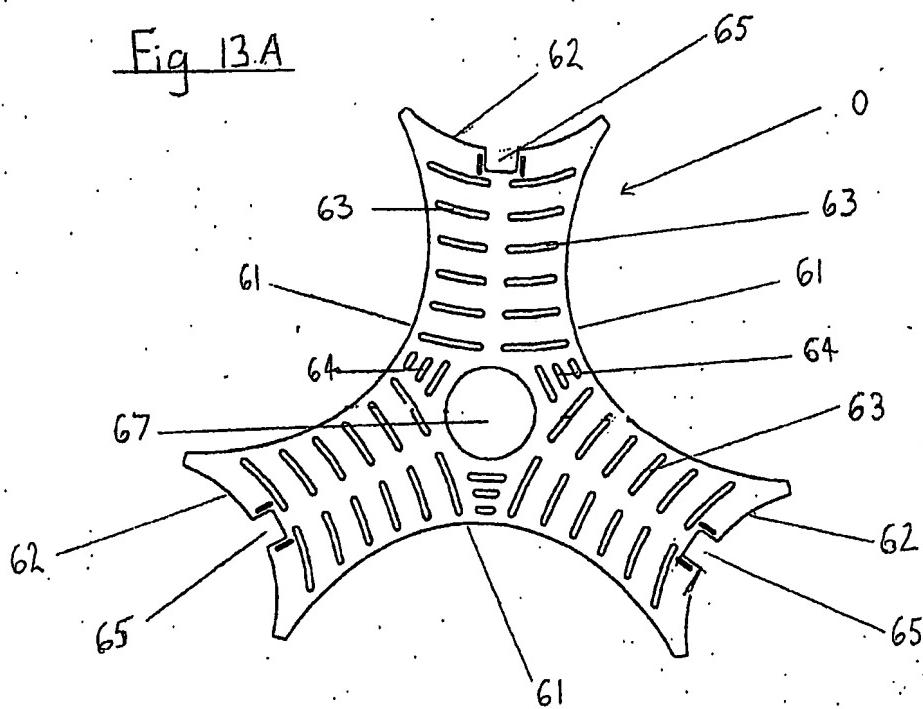


Fig 13.B

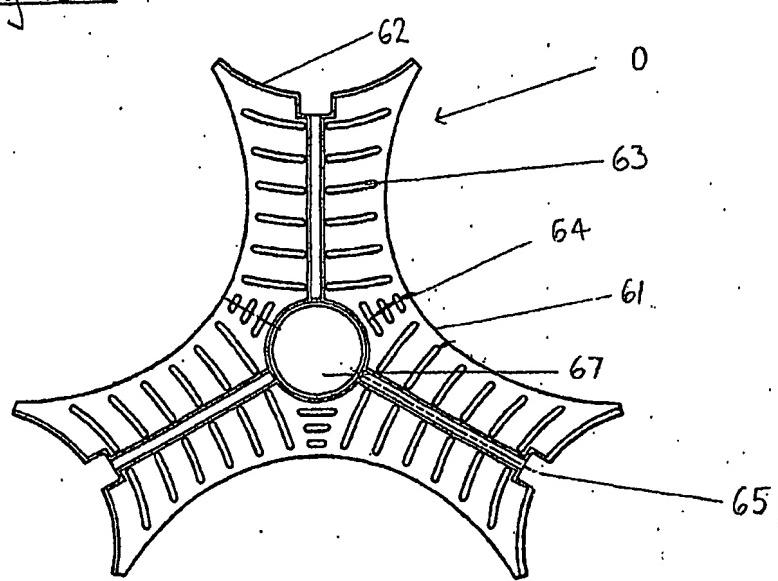


Fig. 13C

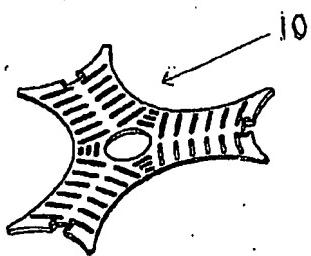


Fig. 13D

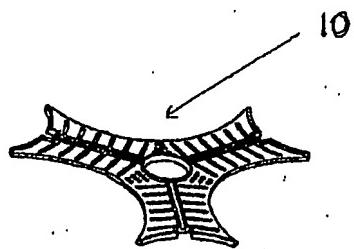


Fig 14A

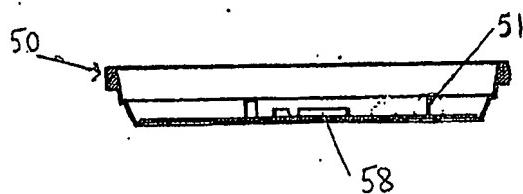


Fig 14B

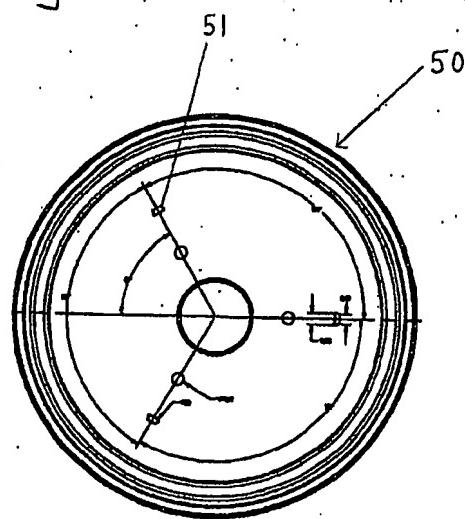


Fig 15

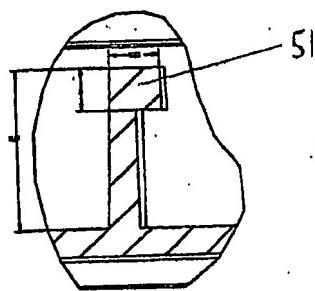


Fig 16



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2004/001095

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member		
DE	2704414	NIL		
FR	2715269	NIL		
GB	2369980	NIL		
US	3452475	NIL		
US	2001/0052199	NIL		
WO	9856233	AU 78978/98	EP	1024687
US	4102081	NIL		
DE	3618833	NIL		
EP	0142471	NIL		

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/001095

A. CLASSIFICATION OF SUBJECT MATTER																						
Int. Cl.?: A01G 9/02, 27/00; B65D 21/00																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
B. FIELDS SEARCHED																						
Minimum documentation searched (classification system followed by classification symbols)																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI, US, EP databases with keywords (eg A01G 9/ic, A01G 27/ic, B65D 21/ic, B65D 85/50, B65D 85/52, stack, water, reservoir, overflow)																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
X	DE 2704414 A (ALBRECHT) 14 September 1978 Entire document	1,2,7,9,13,14, 17-22,26- 30,37,50,51																				
X	FR 2715269 A (MARQUE) 28 July 1995 Entire document	1,2,9,18- 30,42,50,51																				
Y	GB 2369980 A (STONE) 19 June 2002	23-25																				
X	Entire document	1-6,8- 10,13,14,16- 19,23- 25,42,50,51																				
X	US 3452475 A (JOHNSON, Sr) 1 July 1969 Entire document	1- 9,19,20,22,37- 43,45,47,50, 51																				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C		<input checked="" type="checkbox"/> See patent family annex																				
<p>* Special categories of cited documents:</p> <table> <tbody> <tr> <td>"A"</td> <td>document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T"</td> <td>later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E"</td> <td>earlier application or patent but published on or after the international filing date</td> <td>"X"</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L"</td> <td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y"</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O"</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>"&"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"P"</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </tbody> </table>			"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention																			
"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone																			
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art																			
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family																			
"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 8 October 2004	Date of mailing of the international search report 13 OCT 2004																					
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer A. SEN Telephone No : (02) 6283 2158																					

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2004/001095

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/0052199 A1 (KLEIN et al) 20 December 2001 Entire document	1,2,9,20,22,42 50,51
Y	WO 1998/056233 A (KEATS) 17 December 1998 Entire document	1-51
Y	US 4102081 A (MORROW) 25 July 1978 Entire document	1-51
Y	DE 3618833 A (HENKE) 10 December 1987 Entire document	3-6,8,10-17
Y	EP 0142471 A2 (GERBER) 22 May 1985 Entire document	31-36,44
Note: Claims 1, 2, 7, 9, 18-22, 26-30, 37-43, 45-51, each lack an inventive step with respect to WO 1998/056233 when combined with US 4102081; Claims 23-25 each lack an inventive step with respect to WO 1998/056233, US 4102081 and FR 2715269 combined; Claims 3-6, 8, 10-17, each lack an inventive step with respect to WO 1998/056233, US 4102081 and DE 3618833 combined; Claims 31-36, 44, each lack an inventive step with respect to WO 1998/056233, US 4102081 and EP 142471 combined		